

Appl. No. 10/075,289
Reply to Office Action of April 6, 2004

Docket No.: T2147-907715

REMARKS

Claims 1-12 are pending. By this amendment, and without conceding to the propriety of the outstanding Office Action, Claim 1 has been amended to recite a local module and a plurality of remote modules, each of the local module and plurality of remote modules including a coherence controller capable of being connected to a plurality of multiprocessors within the local module, each of the multiprocessors including a local main memory and a plurality of processors each equipped with a cache memory. Each of the coherence controllers including a cache filter directory and a complementary filter directory. Claim 10 has been amended to recite that a plurality of multiprocessor modules, which include a local multiprocessor module and a remote multiprocessor module, each of said multiprocessor modules having a plurality of multiprocessors and a local coherence controller, the local coherence controller including a complementary cache filter directory.

Claims 2, 3, 11 and 12 have been amended for consistency. Applicants respectfully request reconsideration of the rejection of Claims 1-12 under 35 U.S.C. § 102(b) in accordance with the following remarks.

Entry of this Amendment is proper under 37 C.F.R. §1.116 since the Amendment: a) places the application in condition for allowance for the reasons discussed herein; b) does not raise any new issues requiring further search and/or consideration since the Amendment amplifies issues previously discussed throughout prosecution; c) does not present any additional claims without canceling a corresponding number of finally rejected claims; and d) places the application in better form for appeal, should an appeal be necessary. Entry of the Amendment is thus respectfully requested.

Applicants would like to thank Examiner Ho for the courtesies extended to Applicants' representative, Mr. Jason Vick, during the recent informal telephone interviews.

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During the interviews, the general operation of the invention was discussed in relation to Fig. 2 as well as distinctions illustrated between Claim 1 and the Ekanadham reference.

The Office Action rejects Claims 1-12 under 35 U.S.C. § 102(b) as anticipated by U.S. Patent No. 6,085,295 to Ekanadham (hereinafter "Ekanadham"). This rejection is respectfully traversed.

Claims 1 and 10 have been amended to more clearly set forth the constitution and relationship between the local module and the remote modules as illustrated in Fig. 2.

Ekanadham at least fails to disclose or suggest the structure as claimed. Furthermore, and as discussed during the telephone interviews, Ekanadham fails to suggest or disclose the underlying architecture that would even necessitate the need to maintain coherence as outlined in the independent claims.

For example, Fig. 4 of Ekanadham discloses:

... the internal structure of the adapter that enables it to extend cache-coherent shared memory across multiple nodes. It comprises a set of node lists 41 and local processor lists 42. List 41 is maintained for each line of local memory that is cached at a remote node, and list 42 is maintained for each line of remote memory that is cached by a local processor. It also maintains a 2-bit line state directory 43 for lines that are cached by the local processors. The finite state machine (FSM) 40-1 and 2 runs the cache coherence protocol to keep the copies of the lines coherent. When the adapter acts as a proxy processor for a line, it uses the node list associated with the line to determine the remote nodes that need to be notified for coherence actions. When the adapter acts as a proxy memory for a line, it uses the local processor list associated with the line to determine the local processors that need to be notified for coherence actions.

It is clear that Ekanadham does not maintain coherence between the various local and remote memories as the claimed cache filter directory and complementary filter directory do.

Ekanadham does not anticipate the claimed invention. Furthermore, it would not have been obvious to modify the teachings of Ekanadham to achieve the exemplary benefits

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outlined on pages 3-5 of Applicants' Specification since Ekanadham suffers from some of the same drawbacks as highlighted in Applicants' Specification.

For at least the reasons outlined above, and the additional feature(s) recited therein, it will be appreciated that the dependent claims are also not anticipated by Ekanadham. For example, Ekanadham fails to teach or suggest the presence vector as recited in Claims 2 and 11 and the switching device and associated functionality of Claims 9 and 12. Thus, the rejection under 35 U.S.C. § 102 is untenable and should be withdrawn.

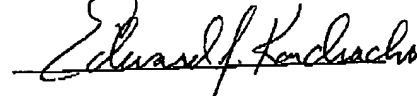
An early Notice of Allowance is respectfully requested.

Should the Examiner believe anything further is desirable in order to place the application in even better condition for allowance, the Examiner is encouraged to contact Applicants' undersigned representative at the telephone number listed below.

The Commissioner is hereby authorized to charge to deposit account number 50-1165 (Docket No. T2147-907715) and fees not included herein, under 37 CFR §§ 1.16 and 1.17, that may be required by this paper and to credit any overpayment to that Account. A duplicate copy of this page is included for such purpose. If any additional extension of time is required in connection with the filing of this paper and has not been separately requested, such extension is hereby requested.

Respectfully submitted,

MILES & STOCKBRIDGE P.C.



Edward J. Kondracki
Reg. No. 20,604

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Miles & Stockbridge P.C.
1751 Pinnacle Dr., Suite 500
McLean, VA 22102
Phone 703-610-8627
Fax 703-610-8686

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